

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 7-12 are drawn to a patentably distinct invention now cancelled without prejudice or disclaimer.

Claims 1-6 are amended below to overcome formality-based grounds of rejection:

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1. (Currently Amended) A multilayered gas sensing element comprising:
laminated layers comprising ~~a zirconia series~~ at least one solid electrolytic sheet
containing zirconia and ~~an alumina series~~ at least one insulating sheet containing alumina,
a bonding boundary intervening between said ~~zirconia series~~ solid electrolytic
sheet and said ~~alumina series~~ insulating sheet, and
said bonding boundary including at least partly a crystal phase containing silicon
dioxide.

add silicon or wa
other impurity
(see 5,122,487)

2. (Currently Amended) ~~The~~ A multilayered gas sensing element as in
~~accordance with~~ claim 1, where said crystal phase further contains at least one component
selected from the group consisting of: calcium oxide, magnesium oxide, barium oxide,
and strontium oxide.

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3. (Currently Amended) ~~The~~A multilayered gas sensing element as in ~~accordance with~~ claim 1, where said bonding boundary between said ~~zirconia-series~~ solid electrolytic sheet and said ~~alumina-series~~ insulating sheet is undulated.

4. (Currently Amended) ~~The~~A multilayered gas sensing element as in ~~accordance with~~ claim 1, where a crystal lattice of said ~~zirconia-series~~ solid electrolytic sheet is connected to a crystal lattice of said ~~alumina-series~~ insulating sheet in said bonding boundary.

5. (Currently Amended) ~~The~~A multilayered gas sensing element as in ~~accordance with~~ claim 1, wherein a thermal expansion coefficient difference between said ~~zirconia-series~~ solid electrolytic sheet and said ~~alumina-series~~ insulating sheet is equal to or less than 2×10^{-6} .

6. (Currently Amended) ~~The~~A multilayered gas sensing element as in ~~accordance with~~ claim 1, wherein a sintering contraction coefficient difference between said ~~zirconia-series~~ solid electrolytic sheet and said ~~alumina-series~~ insulating sheet is equal to or less than 3%.

Claims 7-12 cancelled.

Please add new claim 13:

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cancel

13. (New) A multilayered gas sensing element as in claim 1, where said solid electrolytic sheet contains yttria.

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